

Geosci. Model Dev. Discuss., referee comment RC1
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Comment on gmd-2021-225

Qingxiang Li (Referee)

Referee comment on "Variability and extremes: statistical validation of the Alfred Wegener Institute Earth System Model (AWI-ESM)" by Justus Contzen et al., Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2021-225-RC1>, 2021

The authors present a method for model validation in terms of extreme values based on classical extreme value theory, they further discuss a clustering algorithm to detect spacial dependencies and tendencies for concurrent extremes. CTU TS and AWI-ESM model output are used to tested the statistical approaches. The manuscript was written well, and the results are interesting. I suggest to accept it after minor reviseion.

1) The caption of Fig 1 does not agree with the figs.

2) Since only one model are used in this manuscript, I would suggest the authors choose a model that agree most to the observations. What you need to do is to compare the performance among all available models first, and then apply the methods to that model output. This would more interesting.